

Bullock in a telephone conference with the applicant held on May 18, 1999. However, claims 41, 42 and 55 do differ from claims 1, 2 and 38 in the parent case in that the language "at least a portion of" has been added to the claims. This language is supported in specification by the phrase "all or a part" which appears on page 2, line 19. These claims also differ from the originally filed claims in that the limitation "a heavy hydrocarbon fraction including heavy hydrocarbons" has been moved from step (b) to step (a). This change is supported by the claims as originally filed and in numerous places in the specification such as, for example, on page 1, lines 26-29.

Remarks Regarding References Cited in Parent Case

The Office action cited U.S. 4,579,999 to Gould ("Gould") in view of U.S. 4,677,243 to Kaiser ("Kaiser") as a basis for rejection of some of the claims. The applicant believes that the claims submitted with this preliminary amendment are distinguishable over the references cited in the parent case.

No motivation exists to combine Gould and Kaiser to derive the applicant's invention as claimed. Gould teaches the use and conversion of a feed comprising oxygenates and C₅⁺ hydrocarbons. See col. 2, lines 18-58 and col. 4, lines 14-18. On the other hand, Kaiser does not teach the feed and conversion of a combined oxygenate and hydrocarbon stream. Kaiser provides no information which would direct a person of skill in the art to look to co-feed systems and does not address the performance of such a system.

Further, the two references differ on the catalysts which they employ to carry out their respective processes. Gould requires a zeolite catalyst system (see col. 3, line 43 to col. 4, line 4) to increase the production of desired C₃ and C₄ olefins (see col. 2, lines 29-31 and col. 6, lines 49-50) and minimization of C₂ olefin production (see col. 2, lines 12-15 and col. 4, lines 38-44). On the other hand, Kaiser chooses a catalyst which provides for increase C₂ production relative to the catalysts chosen by Gould. This is illustrated by comparing the examples presented in Kaiser with those presented in Gould.


In short, Gould teaches away from a combination with Kaiser. For this reason alone, the applicant believes that the invention is patentable.

The applicant's invention also differs from the Gould reference. The applicant's invention claims the separation of light olefins (ethylene and propylene) from a heavy hydrocarbon fraction (hydrocarbons having molecular weights heavier than propane, pg. 1, lines 26-29) to increase the production of light olefins. This differs from Gould which teaches a C₄-C₅ separation with a recycle of C₅⁺ to increase production of C₃ and C₄ olefins. Thus, Gould does not teach the applicant's invention.

Based on the foregoing amendments and remarks, the Applicant believes the entire application is in condition for allowance and respectfully requests an early indication thereof. If the Examiner has any questions or comments, she is respectfully requested to contact the undersigned at the telephone or fax number listed below.

Respectfully submitted,

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